

PATENT SPECIFICATION

418,956

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PROVISIONAL SPECIFICATION.

Improvements in Self-feeding Brushes.



We, **RAYMOND HENRY COOMBS**, Park House, Boston Park Road, Brentford, Middlesex, **WILLIAM HENRY KEEVIL**, 143, Thornbury Road, Osterley, Middlesex, and **GEORGE WILLIAM STEPHENSON**, 121, Boston Manor Road, Brentford, Middlesex, all British subjects, do hereby declare the nature of this invention to be as follows:—

10 This invention has reference to self-feeding brushes wherein means are incorporated to feed to the bristles, through the stock, as and when required, a requisite quantity of a paste-like or semi-liquid preparation. The said invention is applicable to brushes in general, but is particularly designed for tooth and shaving brushes, and brushes for applying cosmetics and creams to the face and hair.

20 The invention has for its chief object to provide a simple method of using a collapsible tube (containing the preparation) as a detachable handle for the brush.

25 According to the invention a brush stock or head to which the bristles are fixed is provided with a suitable duct or ducts, opening by an appropriate bore or bores at a space or spaces between the bristle tufts, and said duct or ducts leads from another point on the head where the nozzle of a collapsible tube may be attached in any suitable manner. In conjunction a rigid elongated shield or tube protector is formed with or attached to the stock, or to the said tube, so as to partly surround the tube and form therewith a handle. Said shield, thus facilitates manipulation of the brush in the usual way and prevents inadvertent squeezing of the tube, whilst at the same time it permits access to the tube for squeezing same and forcing the contents through the aforesaid duct or ducts to the bristles.

45 In an embodiment, by way of example,

as applied to a tooth brush, the stock of the brush is of bone, mouldable composition or the like, of any conventional exterior configuration but terminating in an abbreviated part where the handle usually extends. This part is formed with a flared end having a threaded bore disposed substantially longitudinally of the stock, and leading to a duct extending to a point approximately central of the row of bristle tufts. Here a branch is formed opening at the face carrying the bristles.

The threaded bore is large enough to receive the nozzle of a collapsible tube the thread of which is of the same gauge. As the threads on paste tubes are more or less standard, the brush may be fitted on to a large range of existing paste tubes. The shield or handle-like protector device is in the form of an elongated trough deeper at one end, and slightly divergent at the other end to accommodate various sizes of tube, within limits, in a snug manner. The deeper end is formed with an end wall having an aperture through which the tube nozzle may protrude. By this arrangement, by laying the tube in the protector shield and pushing its nozzle through the aperture, the tube may be screwed into the stock and utilised as a clamping means for tightly fixing the shield to the stock.

The closed and apertured end of the shield is convexed to fit the splayed end of the stock which is slightly concave to suit the shield end.

It is to be understood that any suitable means may be adopted for securing the shield and tube, which it protects, to the stock.

Dated this 22nd day of February, 1934.

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Agent for the Applicants.

COMPLETE SPECIFICATION.

Improvements in Self-feeding Brushes.

We, **RAYMOND HENRY COOMBS**, Park House, Boston Park Road, Brentford, Middlesex, **WILLIAM HENRY KEEVIL**, of 143, Thornbury Road, Osterley, Middlesex, and **GEORGE WILLIAM STEPHENSON**, 121, Boston Manor Road, Brentford, Middlesex,

all British subjects, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention has reference to self-feeding brushes wherein means are incorporated to feed to the bristles, through the stock, as and when required, a requisite quantity of a paste-like or semi-liquid preparation. The said invention is applicable to brushes in general, but is particularly designed for tooth and shaving brushes, and brushes for applying cosmetics and creams to the face and hair. The invention relates more particularly to brushes of the type wherein a collapsible tube (containing the preparation) is used as a detachable part of the brush, the handle itself being detachable.

According to the invention a brush stock or head is formed with a suitable duct or ducts leading to the bristles from a feed bore to which a collapsible tube is adapted to be attached, and is provided with a shield shaped to surround partly and protect such an attached tube and to form therewith a handle, said shield being formed with an end wall having an aperture adapted to receive therethrough the threaded nozzle of a collapsible tube housed in the shield, whereby said shield may be clamped to the stock by screwing the said nozzle into the feed bore of the stock. The shield, thus facilitates manipulation of the brush in the usual way and prevents inadvertent squeezing of the tube, whilst at the same time it permits access to the tube for squeezing same and forcing the contents through the aforesaid duct or ducts to the bristles.

An embodiment of the invention is illustrated in the accompanying drawings, by way of example, and in said drawings:—

Figure 1 is a side elevation, partly in longitudinal section (showing a collapsible tube in position);

Figure 2 is an inverted plan;

Figure 3 is an end view of the shield or handle part looking from the right of Figure 1; and

Figure 4 is a cross section on the line IV—IV of Figure 1.

In the said embodiment the invention is shown applied to a tooth brush. The stock 1 of the brush is of bone, mouldable composition or the like, of any conventional exterior configuration but terminating in an abbreviated part 2 where the handle usually extends. This part is formed with a flared end 3 having a threaded feed bore 4 disposed substantially longitudinally of the stock, and leading

to a duct 5 extending to a point approximately central of the row of bristle tufts 6. Here a branch 7 is formed opening at the face carrying the bristles.

The threaded bore 4 is large enough to receive the nozzle 8 of a collapsible tube 9 the thread of which is of the same gauge. As the threads on paste tubes are more or less standard and of soft ductile material, the brush may be fitted on to a large range of existing paste tubes. The shield or handle-like protector device is in the form of an elongated trough 10 deeper at one end 11 than the other, and slightly divergent at the other end 12 to accommodate various sizes of tube, within limits, in a snug manner. The deeper end 11 is formed with an end wall 13 having an aperture 14 (Figure 3) through which the tube nozzle 8 may protrude. By this arrangement, by laying the tube 9 in the protector shield 10 and pushing its nozzle 8 through the aperture 14, the tube may be screwed into the stock 1 and utilised as a clamping means for tightly fixing the shield to the stock.

The closed and apertured end 13 of the shield is convexed to fit the splayed end 3 of the stock which is slightly concave to suit the shield end.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. A self-feeding brush of the type set forth comprising a stock or head with a suitable duct or ducts leading to the bristles from a feed bore to which a collapsible tube is adapted to be attached and a shield shaped to surround partly and protect such an attached tube and to form therewith a handle, said shield being formed with an end wall having an aperture adapted to receive therethrough the threaded nozzle of a collapsible tube housed in the shield, whereby said shield may be clamped to the stock by screwing the said nozzle into the feed bore of the stock.

2. A self-feeding brush according to Claim 1 wherein the shield is in the form of an elongated trough deeper at one end and slightly divergent at the other end, said deeper end being formed with the apertured end wall.

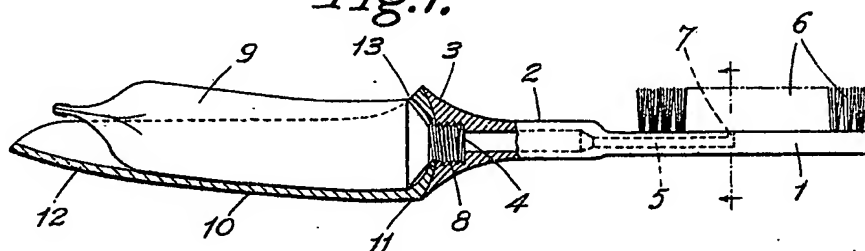
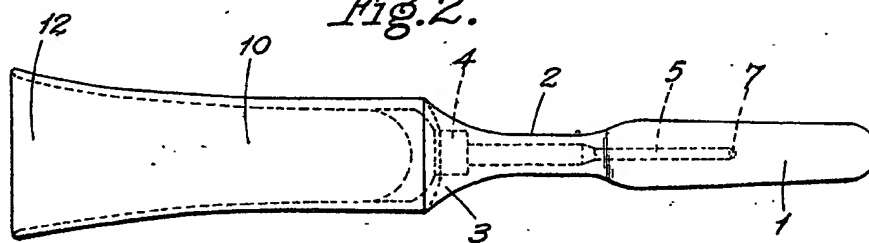
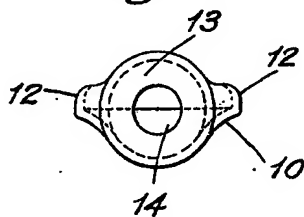
3. A self-feeding brush comprising in combination a stock and detachable handle substantially as herein described with reference to the accompanying drawings.

Dated this 13th day of March, 1934.

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig.1.*Fig.2.**Fig.3.**Fig.4.*